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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,056	09/02/2004	Christian Kuhrs	256198US0PCT	2493

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT PAPER NUMBER

1621

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/502,056

Applicant(s)

KUHS ET AL.

Examiner

Chukwuma O. Nwaonicha

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/1/05
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) 27-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

Claims 16-32 are pending in the application.

#### ***Election/Restrictions***

Applicants' election, filed on 3/3/05 with traverse of Group I is acknowledged. The traversal is on the ground(s) that Groups 1-3 are not independent and patentably distinct inventions because the claims are related to one invention. The traversal was not found persuasive because Groups 1 is directed to a catalyst composition, Group 2 is directed to a fixed-bed catalyst while Group 3 is directed to a process for preparing 1,2-dichloroethane. Therefore, they are different inventions and require different search strategies that will impose an undue burden on the Examiner.

The requirement is still deemed proper and is therefore made **FINAL**.

Claims 27-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable generic or linking claim. All claims consisting of Group 1: claims 16-26 will be examined on the merits. Applicants are reminded of their right to file divisional applications to the non-elected claims.

Applicants' are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims** 16-19 and 21-26 are rejected under 35 U.S.C. 102(b) as being anticipated by SUMITOMO CHEMICAL COMPANY LIMITED, {EP 0 577 059 A1}.

SUMITOMO CHEMICAL COMPANY LIMITED discloses an oxychlorination catalyst composition comprising a carrier material, copper salt from 0.05 to about 40% by weight of copper, vanadium salt from 0.05 to about 40% by weight of vanadium, palladium salt from 0.05 to about 40% by weight of palladium, alkaline metal and alkaline earth metal which are supported on the carrier. See page 2, lines 28-55, page 3, lines 1-20 and the claims on pages 7-8.

**Claims** 16-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Kominami et al., {US 3,504,043}.

Kominami et al. disclose an oxychlorination catalyst composition as claimed by applicants. See page 2, lines 5-65 and lines 70-108.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

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subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims** 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUMITOMO CHEMICAL COMPANY LIMITED, {EP 0 577 059 A1} in view of Kominami et al., {US 3,504,043}.

Applicants' claim a catalyst composition for the oxychlorination of ethylene, comprising a mixture of metal salts on a support, wherein said metal salts are applied to the support in such ratios that the catalyst composition comprises a) from 3 to 12% by weight of copper as copper salt, b) from 0 to 3% by weight of an alkaline earth metal as alkaline earth metal salt, c) from 0 to 3% by weight of an alkali metal as alkali metal salt, d) from 0.001 to 0.1% by weight of at least one metal selected from the group consisting of ruthenium, rhodium, palladium, osmium, iridium and platinum, and/or from 0.0001 to 0.1% by weight of gold, as corresponding metal salt or tetrachloroauric acid, and wherein all percentages by weight are based on the total weight of the catalyst including support material; wherein all the other variables are as defined in the claims.

**Determination of the scope and content of the prior art (M.P.E.P. §2141.01)**

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SUMITOMO CHEMICAL COMPANY LIMITED teaches an oxychlorination catalyst comprising a carrier material, copper salt from 0.05 to about 40% by weight of copper, vanadium salt from 0.05 to about 40% by weight of vanadium, palladium salt from 0.05 to about 40% by weight of palladium, alkaline metal and alkaline earth metal which are supported on the carrier. See page 2, lines 28-55, page 3, lines 1-20 and the claims on pages 7-8.

**Ascertainment of the difference between the prior art and the claims (M.P.E.P..**

**§2141.02)**

SUMITOMO CHEMICAL COMPANY LIMITED'S catalyst composition differ from the instantly claimed process in that SUMITOMO CHEMICAL COMPANY LIMITED does not teach an oxychlorination catalyst system that employs gold salt.

However, Kominami et al. teach an oxychlorination catalyst composition that employs gold salt. See page 2, lines 5-65 and lines 70-108.

The Examiner notes the variation of the metal salt concentration in SUMITOMO CHEMICAL COMPANY LIMITED and Kominami et al.'s catalyst compositions and that of applicants. While SUMITOMO CHEMICAL COMPANY LIMITED teaches a composition wherein the metals content in the composition varies from 0.05 to 45% weight of metal, Kominami et al. teach an oxychlorination catalyst composition wherein the metal salt is 0.05 mol per 100 g. of carrier while applicants claim a composition wherein the metal content varies from 0.001- 12% of metal.

**Finding of prima facie obviousness—rational and motivation (M.P.E.P.. §2142-**

**2143)**

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The instantly claimed oxychlorination catalyst composition would have been suggested to one of ordinary skill because one of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the metal salts and their concentration since SUMITOMO CHEMICAL COMPANY LIMITED and Kominami et al. specifically teach that a mixture of metal salts at various concentration level will produce an oxychlorination catalyst composition. Said person would have been motivated to practice the teachings of SUMITOMO CHEMICAL COMPANY LIMITED and Kominami et al. by formulating an oxychlorination catalyst composition comprising metal salts at different ratio useful in industrial applications. Furthermore, the Examiner notes that the variation of metal concentration in the oxychlorination catalyst composition depends on individual choice in order to optimize the efficiency of the system, and do not constitute a patentable distinction. Therefore, the instantly claimed invention would have been suggested to one of ordinary skill in the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.  
Patent Examiner  
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Johann R. Richter, Ph.D., Esq.  
Supervisory Patent Examiner,  
Technology Center 1600